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NABL ACCREDITED AS PER ISO/IEC 17025:2005

Job No.: CECTC-CGC-Ward No.09-2013-14 **Date:** 06.01.2014

Aggregate Impact Value
IS: 2386 Part IV

Client	**Assistant Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	**Sri.C.G.Chandrappa,** Contractor, #4AC-402, CGC Complex, Basement floor, 4th Cross, 2nd Block, H.R.B.R Layout, Kalyan Nagara, Bangalore-43.
Name of the Work	Improvements and Asphalting to Road at Defence Colony in Ward No.06, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-TND/79/2013-14 Dated:17.07.2013
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	06.01.2014

Sl No.	Details	Trial No.			Average
		1	2	3	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	387	385	383	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	86	82	85	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	301	303	298	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	22.22	21.30	22.19	**21.90**

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Information furnished by Agency

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Job No.: CECTC-CGC-Ward No.09-2013-14 **Date** : 06.01.2014

GRADATION FOR WMM
MORTH (5th Revision) TABLE-400-13

Client : **Assistant Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Sri.C.G.Chandrappa,** Contractor, #4AC-402, CGC Complex, Basement floor, 4th Cross, 2nd Block, H.R.B.R Layout, Kalyan Nagara, Bangalore-43.

Name of Work : Improvements and Asphalting to Road at Defence Colony in Ward No.06, Byatarayanapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-TND/79/2013-14 Dated:17.07.2013

Date of Testing : 06.01.2014

Material : Wet Mix Macadam

Sample Location : WMM Mix Plant Oven Dry Wt (gm): **12561**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	482	482	3.8	96.2	95-100
22.4	4410	4892	38.9	61.1	60-80
11.2	2165	7057	56.2	43.8	40-60
4.75	1875	8932	71.1	28.9	25-40
2.36	1136	10068	80.2	19.8	15-30
0.600	1398	11466	91.3	8.7	8-22
0.075	785	12251	97.5	2.5	0-5

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Job No.: CECTC-CGC-Ward No.09-2013-14 **Date** : 06.01.2014

ATTERBERG LIMITS TEST FOR WMM
MORTH TABLE-400-13

Client : **Assistant Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

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Name of Work : Improvements and Asphalting to Road at Defence Colony in Ward No.06, Byatarayanapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-TND/79/2013-14 Dated:17.07.2013

Date of Testing : 06.01.2014

Material : Wet Mix Macadam

Sample Location : WMM Mix Plant

As per MORTH Table 400-13

Sl. No.	Particulars	Test Results	Standards as per Morth Specifications
1	Liquid Limit, %	23.85	Nill
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Information is furnished by the Agency

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Job No.: CECTC-CGC-Ward No.09-2013-14 Date:10.01.2014

TEST REPORT

Client	:	**Assistant Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	:	**Sri.C.G.Chandrappa,** Contractor, #4AC-402, CGC Complex, Basement floor, 4th Cross, 2nd Block, H.R.B.R Layout, Kalyan Nagara, Bangalore-43.
Name of the work	:	Improvements and Asphalting to Road at Defence Colony in Ward No.06, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	:	EE/BTP/BBMP/E-TND/79/2013-14 Dated:17.07.2013
Source of location	:	Hot mix Plant, Bangalore
Date of testing	:	10.01.2014

The results of the tests conducted on the bitumen sample using for Semi Dense Bituminous Concrete

Sl. No	Description	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	88	80 to 100
2	Softening point, ^{0}C	45	Min. 40
3	Ductility at 27^{0}C, cm	100 >	Min. 75
4	Flash Point, ^{0}C	280	Min. 220

Information Furnished by the Agency

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Job No.: CECTC-CGC-Ward No.09-2013-14 Date: 10.01.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	**Assistant Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	**Sri.C.G.Chandrappa,** Contractor, #4AC-402, CGC Complex, Basement floor, 4th Cross, 2nd Block, H.R.B.R Layout, Kalyan Nagara, Bangalore-43.
Name of the Work	Improvements and Asphalting to Road at Defence Colony in Ward No.06, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-TND/79/2013-14 Dated:17.07.2013
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	10.01.2014

Sl No.	Details	Trial No. 1	Trial No. 2	Trial No. 3	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	378	376	379	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	90	87	88	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	288	289	291	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	23.81	23.14	23.22	**23.39**

Comments:

→ Maximum allowable Aggregate Impact value for Semi Dense Bituminous Concrete is 27%

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Job No.: CECTC-CGC-Ward No.09-2013-14 10.01.2014

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX
AASHTO T 164 & AASHTO T 30

CLIENT	**Assistant Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
AGENCY	**Sri.C.G.Chandrappa,** Contractor, #4AC-402, CGC Complex, Basement floor, 4th Cross, 2nd Block, H.R.B.R Layout, Kalyan Nagara, Bangalore-43.
NAME OF THE WORK	Improvements and Asphalting to Road at Defence Colony in Ward No.06, Byatarayanapura Sub Division, BBMP, Bangalore.
REFERENCE	EE/BTP/BBMP/E-TND/79/2013-14 Dated:17.07.2013
DATE OF TESTING	10.01.2014

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	473	474
3. Weight of Asphalt and Mineral matter Extracted,	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	27	26.00
7. Bitumen content in %	5.40	5.20
8. Average	**5.30**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	23.5	4.97	4.97	95.03	90-100
4.75	255.4	54.00	58.96	41.04	35-51
2.36	45.8	9.68	68.65	31.35	24-39
1.18	38.6	8.16	76.81	23.19	15-30
0.3	30.5	6.45	83.26	16.74	9-19
0.075	41.8	8.84	92.09	7.91	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	23.6	4.72	4.72	95.28	90-100
4.75	228.4	45.68	50.40	49.60	35-51
2.36	95.3	19.06	69.46	30.54	24-39
1.18	43.5	8.70	78.16	21.84	15-30
0.3	24.5	4.90	83.06	16.94	9-19
0.075	45.9	9.18	92.24	7.76	3-8

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